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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,482	09/26/2001	Haruyuki Mizuno	2001-1209A	9656

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EXAMINER

KEEHAN, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 11/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/937,482

Applicant(s)

MIZUNO ET AL.

Examiner

Christopher M. Keehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: On page 7, line 16-page 8, line 5 of the specification, Applicant refers to "a quantity of the alkyl group is preferably larger than a quantity of the carbon fluoride group." It is not clear how the quantity is being defined. Additionally, on page 9, lines 13-17 of the specification, Applicant discloses "the stain resistant treatment of the present invention is applied to an already used treated surface." It is not clear what "an already used treated surface" pertains to. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5, 6, 16, and 17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. On page 7, line 16-page 8, line 5 of the specification, Applicant refers to "a quantity of the alkyl group is preferably larger than a quantity of the carbon fluoride group." It is not clear how the "quantity" is being defined, by molecular weight, by the number of atoms, by the number of molecules in the

compounds, etc. There is no definition of this in the specification and therefore does not enable one skilled in the art to ascertain it's meaning.

Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. On page 9, lines 13-17 of the specification, Applicant discloses "the stain resistant treatment of the present invention is applied to an already used treated surface." It is not clear what "an already used treated surface" pertains to. The specification does not enable one skilled in the art to ascertain how the surface has been used, or in what manner. An already used surface can be a surface that has been cleaned prior to applying a composition.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5, 7, 9-16, 18, and 20-24 are rejected under 35 U.S.C. 102(a) as being anticipated by Mizuno et al. (JP 2000-265526). The cited passages of JP 2000-265526 are based upon the attached machine translation of the Japanese document obtained from the JPO website at [http://www.ipdl.jpo.go.jp/homepg\\_e.ipdl](http://www.ipdl.jpo.go.jp/homepg_e.ipdl). Regarding claims 1,

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2, 12, and 13, Mizuno et al. disclose a ceramic product having a treated surface formed with a layer composed of a stain resistant agent (Abstract), the agent including a silicon-containing functional group (Sections 0034 and 0035) combining with a hydroxyl group present on the treated surface by dehydration or dehydrogenation, and wherein the silicon-containing functional group does not combine with another silicon-containing functional group (Section 0034).

Regarding claims 3 and 14, Mizuno et al. disclose wherein the stain resistant agent contains a terminal carbon fluoride group combining with the silicon-containing functional group (Sections 0034 and 0035).

Regarding claims 4 and 15, Mizuno et al. disclose the instantly claimed carbon fluoride group (Section 0034).

Regarding claims 5, and 16, Mizuno et al. disclose wherein the stain resistant agent contains a terminal carbon fluoride group combining with the silicon-containing functional group and a terminal alkyl group combining with the silicon-containing functional group, and the alkyl group has a larger quantity than the carbon fluoride group (Section 0034).

Regarding claims 7 and 18, Mizuno et al. disclose wherein the silicon-containing functional group and the alkyl group are combined with each other by dimethyl silicone (Section 0035).

Regarding claims 9 and 20, Mizuno et al. disclose wherein the stain resistant agent is a mixture of a first agent and a second agent, the first agent being a co-hydrolyzate of an organic silicon compound containing the instantly claimed groups, and

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the second agent being a mixture of organopolysiloxane and a strong acid (Section 0035).

Regarding claims 10 and 21, Mizuno et al. disclose wherein the dimethyl siloxane contains a straight chain combination of the silicon-containing functional group and the alkyl group (Section 0035).

Regarding claims 11 and 24, Mizuno et al. disclose wherein the treated surface is repeatedly wetted and dried (Abstract). It is the examiner's position that the treated surface of a toilet as disclosed by Mizuno et al. (Abstract), during use, is repeatedly wetted and dried by flushing and periods of not being used.

Regarding claim 22, Mizuno et al. disclose wherein the surface has already been used (Abstract).

Regarding claim 23, Mizuno et al. disclose a pretreatment step of reproducing a hydroxyl group on the treated surface (Sections 0013-0015, and Sections 0041-0047).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 8, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al. (JP 2000-265526). Mizano et al., as applied above, are

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as set forth and incorporated herein. Mizano et al. do not appear to specifically disclose the instantly claimed carbon fluoride group having a larger quantity than the alkyl group, based on the examiner's interpretation of the definition of "quantity" (as set forth above in the 112 first and second paragraph rejections). However, as it appears Applicant has shown no criticality as to a larger quantity of carbon fluoride than alkyl group, and in fact Applicant claims the opposite (claims 5 and 16), it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a larger quantity of carbon fluoride than alkyl group, as instantly claimed, through routine experimentation and optimization. It has been held that where the general conditions are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 105 USPQ 233, 235.

Regarding claims 8 and 19, Mizuno et al. disclose wherein the silicon-containing functional group and the alkyl group are combined with each other by dimethyl silicone (Section 0035).

Claims 1-22 and 24 are rejected under 35 U.S.C. 103(a) as obvious over Asai et al. (5,599,893) in view of Applicant's admitted prior art (specification, page 8, lines 17-21). Regarding claims 1-21 and 24, it appears that Asai et al. disclose the instantly claimed limitations, as Applicant has stated in the specification that this composition is used in the instant invention (page 8, lines 17-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the composition of Asai et

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al. to have met the instantly claimed limitations because Applicant teaches that the composition of Asai et al. is used in the instant invention.

Regarding claim 22, Asai et al. appear to disclose a surface that has already been used, such as by cleaning before applying the composition (col.8, lines 20-26).

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al. (5,599,893) in view of Mizuno et al. (JP 2000-265526). Asai et al., as applied above, are as set forth and incorporated herein. Asai et al. do not appear to specifically disclose an already used surface or the pretreatment thereof. Asai et al. do disclose Applicant's composition (col.1, line 64-col.7, line 15) on a ceramic substrate (col.1, lines 6-9). Mizuno et al. disclose Applicant's composition applied to an already used surface and the pretreatment thereof (Abstract, Sections 0013-0015, and Sections 0041-0047). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the composition of Asai et al. to an already used surface and a pretreatment thereof because Mizuno et al. teach that applying the same composition as Asai et al. to an already used surface and the pretreatment thereof produces a strongly formed stainproofing layer resulting in a higher quality and more versatile product.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is



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(703) 305-2778. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Christopher Keehan *CMK*

November 5, 2002



Robert Dawson  
Supervisory Patent Examiner  
Technology Center 1700